

TRANSPORTATION AND LAND USE COMMITTEE  
ACTION ITEM

#2

**SUBJECT: ENDORSEMENT OF BELMONT RIDGE ROAD (ROUTE 659) PUBLIC HEARING PLANS AND OPTIONS FOR CONSTRUCTION FROM HARRY BYRD HIGHWAY (ROUTE 7) TO THE DULLES GREENWAY (ROUTE 267)**

**ELECTION DISTRICTS: BROAD RUN AND DULLES DISTRICT**

**CRITICAL ACTION DATE: At the discretion of the Board**

**RECOMMENDATION:**

Staff recommends that the Committee recommend Board endorsement of the Belmont Ridge Road Public Hearing Plans (State/VDOT Project Number 0659-053-262, P102 and Federal Number STP-053-9(021)) and the preferred alternative for construction of the initial phase of Belmont Ridge Road as described.

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**BACKGROUND:**

On February 25, 2008, Office of Transportation Services (OTS) staff presented an action item to the Transportation and Land Use Committee seeking Board of Supervisors endorsement of the Belmont Ridge Road (Route 659) Public Hearing Plans. These plans depict a Virginia Department of Transportation (VDOT) project that proposes the widening and reconstruction of Belmont Ridge Road from Harry Byrd Highway (Route 7) to the Dulles Greenway (Route 267) as a four-lane, median-divided facility on a six-lane right-of-way.

As discussed in the item from the February 25, 2008 meeting, Belmont Ridge Road is a Countywide Transportation Plan (CTP) road and is classified as an urban minor arterial facility. The existing two-lane roadway has approximately 20 feet of asphalt pavement with minimal shoulders and no bicycle or pedestrian facilities. Traffic use for 2006 was approximately 16,000 vehicles per day (vpd) and the projected traffic increase is 26,000 vpd by 2032. Currently, up to 11% of existing traffic is in the form of heavy trucks. For capacity and safety, the existing two-lane roadway is considered inadequate.

Initially, the project was planned by VDOT to be constructed in two segments, due to existing funding constraints. The first segment was to start at the intersection of Belmont Ridge Road with Gloucester Parkway and end at the intersection with Harry Byrd Highway. The second segment was to start at the intersection with the Dulles Greenway and end at the intersection with Gloucester Parkway. Prior to the public hearing (held December 10, 2007), the first segment was considered to be fully funded, and the second segment was accumulating funds for right-of-way acquisition and construction.

As VDOT refined their cost estimates for the project over time, it became clear that there was a significant shortfall in funding available for the proposed first segment from Gloucester Parkway to Harry Byrd Highway, in the amount of approximately \$11 million. As such, without full funding of the right-of-way and construction phases identified, the project would not be able to move to the right-of-way acquisition phase. This issue was brought to the attention of the Transportation and Land Use

Committee members at the February 25, 2008 meeting. The Committee chose to direct County/VDOT staff to develop a strategy to address the funding shortfall through scope revisions and/or construction phasing, return to the Committee with a recommendation, and at that time the Committee would address endorsement of the Public Hearing plans. The Committee also asked staff to provide a detailed analysis of the public comments obtained from the Public Hearing and recommendations to address those comments as needed.

**Phasing Alternatives:**

VDOT has since provided an analysis of phasing alternatives for the project in an effort to address the funding shortfall. The intent of the VDOT analysis was to keep the design of a four-lane facility on a six-lane right-of-way, but to work towards getting at least a half-section of the four-lane facility planned for construction. The construction would be phased to keep costs down and also address as many safety issues as possible. This would allow for future phases to be built as funding becomes available using the approved design.

Cost Estimates:

For the VDOT phasing analysis, the original project limits were divided into three segments: Gloucester Parkway to Harry Byrd Highway (Route 7), Portsmouth Boulevard to Gloucester Parkway, and Chesterton Street to Portsmouth Boulevard. For each segment, cost estimates were developed for full, modified full, and half sections of a four-lane facility. This resulted in nine possible options for an initial construction phase. The modified full sections are essentially full sections with certain features removed, such as landscaping, shared use paths, etc. A full description of these modifications is included in attachment 1, as well as a summary of the VDOT analysis. The costs to obtain right-of-way and construct a full section, modified full section and half section of Belmont Ridge Road for each segment are as follows:

<b>Segment</b>	<b>Full Section</b>	<b>Modified Full Section</b>	<b>Half Section</b>
Gloucester Parkway to Harry Byrd Highway	\$33.4M	\$32.4M	\$25.9M
Portsmouth Boulevard to Gloucester Parkway	\$39.7M	\$39.5M	\$27.9M
Chesterton Street to Portsmouth Boulevard	\$18.2M	\$18.0M	\$14.4M

Accident Analysis:

VDOT has also provided an analysis of accidents that have occurred within the project limits for the years 2005-2007. The types of accidents examined included angle accidents, deer accidents, fixed object/off-road accidents, non-collision/off-road accidents, rear end accidents, and side swipe/opposite direction accidents. Accidents are shown by type and location in attachment 5. The analysis showed that the greatest number of accidents were fixed object/off-road accidents (38), occurring throughout the corridor. Rear end accidents were also prevalent (20) throughout the corridor. Angle, deer, non-collision/off-road, and side swipe/opposite direction accidents were comparatively less prevalent, with

less than ten total for each crash type in the time period studied. Although the various types of accidents occurred throughout the corridor, it can be said that a larger number of accidents have occurred near Route 7.

**Public Comment:**

OTS staff reviewed and analyzed the public comments on the project received through the Public Hearing process. A total of 156 comments were analyzed, falling into 20 general categories. A significant number of comments were in support of the project, or support with modifications (56). Twenty-three citizens opposed the project. A considerable number of comments were also made regarding the need for noise walls (14), minimizing impacts to trees (12) and increasing safety (17). Each of the comment categories are addressed in attachment 2, with OTS staff recommendations/comments included. The VDOT executive summary and public transcript from the Public Hearing are included as attachments 3 and 4, respectively. OTS staff considers the public comments to be adequately addressed.

**ISSUES:**

**Analysis of Alternatives:**

Currently, VDOT has approximately \$21.2 million available through fiscal year 2014 to fund the first phase of the project through construction. Any alternatives requiring more than this amount would require the transfer of funds from other projects in the Secondary Six Year Plan (SSYP), or supplemental funding from other sources such as the Congestion Mitigation and Air Quality (CMAQ) or Regional Surface Transportation (RSTP) programs. In light of the above, and in consideration of the totality of issues involved, an analysis of each of the alternatives is provided below, by segment:

Segment 1: Gloucester Parkway to Harry Byrd Highway (Route 7)

- Estimated costs for construction of full, modified full, or half section each exceed the \$21.2 million available through fiscal year 2014.
- This segment terminates at Route 7, where a future interchange is currently being designed; while a critical segment, holding off until there is the ability to tie the project in with the interchange is highly desirable.

Segment 2: Portsmouth Boulevard to Gloucester Parkway

- Estimated costs for construction of full, modified full, or half section each exceed the \$21.2 million available through fiscal year 2014.
- This segment crosses the Washington and Old Dominion Trail (W&OD), a busy trail crossing with potential for dangerous interactions between pedestrians/ bicyclists; construction of the segment includes a grade separated crossing of the trail.

Segment 3: Chesterton Street to Portsmouth Boulevard

- With \$21.2 million available through fiscal year 2014, construction of a full, modified full or half section are all feasible.
- With the least number of accidents, this segment does not represent as significant a safety concern to motorists or pedestrians/bicyclists.

**Recommendation for Preferred Alternative:**

Given the analysis of alternatives, it is recommended that a half-section of Segment 2: Portsmouth Boulevard to Gloucester Parkway is chosen as the preferred alternative for the initial phase of this project. The cost of this alternative as shown previously is \$27.9 million (in today's dollars). Using a factor of 6% inflation for fiscal years 2008-09 to acquire right-of-way, the total is \$28.4 million. While the construction of the half section for this segment exceeds the \$21.2 million available through fiscal year 2014 (by \$7.2 million), supplemental funding is possible. Currently, there are \$3.3 million of CMAQ funds and \$3.7 million of RSTP funds, for a total of \$7 million available for this year. In addition, CMAQ and RSTP funds are anticipated to be available next year as well, again for a total of \$7 million, totaling \$14 million over two years. Directing CMAQ and RSTP funds to this project would allow other projects in the SSYP to remain untouched.

It should be noted that an inflation factor of 11.5% was used for the period between fiscal years 2008 and 2014 for each of the alternatives (for construction costs only). This inflation factor may be low given the uncertainty of future estimates in out years, the real estate market, and the increasing costs of fuel and materials. Therefore, two years of CMAQ and RSTP funds should be applied to the project, but not more than two years due to the uncertainty of the market. Finally, if all funds are available by fiscal year 2012, it is anticipated that project to construct the half section of Belmont Ridge Road from Portsmouth Boulevard to Gloucester Parkway could be out for bids by mid- to late 2011 (fiscal year 2012).

**FISCAL IMPACT:**

At this time, no local funding is involved since this project is on the VDOT Six-Year Secondary Road Program.

**DRAFT MOTION(S):**

1. I move that the Transportation and Land Use Committee recommend to the full Board endorsement of the Belmont Ridge Road (Route 659) Public Hearing Plans (VDOT Project Number 0659-053-262, C502) with the phasing for the first segment for construction to be the half section from Portsmouth Boulevard to Gloucester Parkway, and direct that additional funding of approximately \$14 million from CMAQ and RSTP over the next two years be allocated to this project.

**OR**

2. I move an alternate motion.

**ATTACHMENT:**

1. VDOT Phasing Alternatives
2. OTS Route 659 Public Hearing Plans Comments Issues Analysis
3. VDOT Executive Summary
4. VDOT Design Public Hearing Summary
5. VDOT 2005-2007 Accident Data Maps

**STAFF CONTACTS:**

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